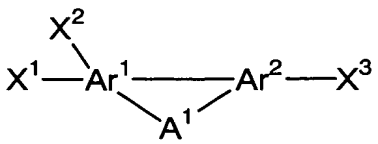
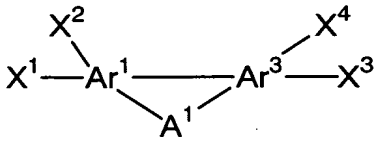
CLAIMS

1. An aromatic compound of the following formula (1) or formula (2):


(1)

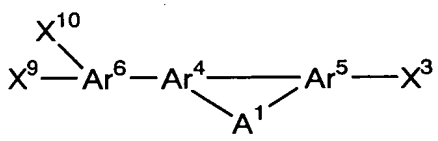

(2)

[wherein, Ar^1 and Ar^3 each independently represent a tetra-valent aromatic hydrocarbon group or a tetra-valent heterocyclic group. Ar^2 represents a tri-valent aromatic hydrocarbon group or a tri-valent heterocyclic group, Ar^1, Ar^2 and Ar^3 may have a substituent, and when Ar^1 and Ar^2 have a substituent, these may be connected to form a ring and when Ar^1 and Ar^3 have a substituent, these may be connected to form a ring. A^1 represents $-Z^1-$, $-Z^2-Z^3-$ or $-Z^4=Z^5-$, Z^1, Z^2 and Z^3 each independently represent O, S, C(=O), S(=O), SO_2, $C(R^1)(R^2)$, $Si(R^3)(R^4)$, $N(R^5)$, $B(R^6)$, $P(R^7)$ or $P(=O)(R^8)$, and Z^4 and Z^5 each independently represent N, B, P, $C(R^9)$ or $Si(R^{10})$ (wherein, R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9 and R^{10} each independently represent a hydrogen atom, halogen atom, alkyl group, alkyloxy group, alkylthio group, aryl group, aryloxy group, arylthio group, arylalkyl group, arylalkyloxy group, arylalkylthio group, acyl group, acyloxy group, amide group, acid imide group, imine residue, amino group, substituted amino group, substituted silyl group, substituted silyloxy group, substituted silylthio group, substituted silylamino group, mono-valent heterocyclic group, heteroaryloxy group, heteroarylthio group, arylalkenyl group, arylethynyl group, carboxyl group, alkyloxycarbonyl group, aryloxycarbonyl group, arylalkyloxycarbonyl group, heteroaryloxycarbonyl group or cyano group. Here, R^1, R^2, R^3 and R^4 may be mutually connected to form a ring). In formula (1), Ar^2 and A^1 are connected to mutually adjacent atoms on Ar^1 ring and Ar^1 and A^1 are connected to mutually adjacent atoms on Ar^2 ring, and in formula (2), Ar^3 and A^1 are connected to mutually adjacent atoms on Ar^1 ring and Ar^1 and A^1 are connected to mutually adjacent atoms on Ar^3 ring. X^1, X^2, X^3 and X^4 each independently represent a halogen atom, alkylsulfonate group, arylsulfonate group,

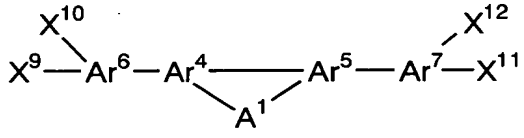
arylalkylsulfonate group, boric ester group group, $-B(OH)_2$, methyl monohalide group, sulfonium methyl group, phosphonium methyl group, phosphonate methyl group, cyanomethyl group, formyl group, vinyl group, hydroxyl group, alkyloxy group, acyloxy group, substituted silyloxy group, amino group or nitro group, and at least one of X^1, X^2 and X^3 in formula (1) and at least one of X^1, X^2, X^3 and X^4 in formula (2) are selected from a halogen atom, alkylsulfonate groups, arylsulfonate group, arylalkylsulfonate group, boric ester group group, $-B(OH)_2$, methyl monohalide group, sulfonium methyl group, phosphonium methyl group, phosphonate methyl group, cyanomethyl group, formyl group and vinyl group.]

2. The aromatic compound according to Claim 1, wherein all of X^1, X^2 and X^3 in formula (1) and all of X^1, X^2, X^3 and X^4 in formula (2) are selected from a halogen atom, alkylsulfonate group, arylsulfonate group, arylalkylsulfonate group, boric ester group group, $-B(OH)_2$, methyl monohalide group, sulfonium methyl group, phosphonium methyl group, phosphonate methyl group, cyanomethyl group, formyl group and vinyl group.

3. An aromatic compound of the following formula (5) or formula (6):



(5)



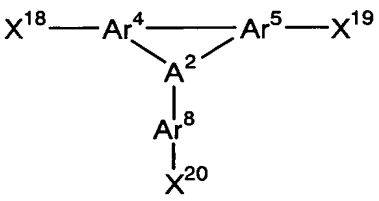
(6)

[wherein, A^1 and X^3 represent the same meaning as described above, Ar^4, Ar^5, Ar^6 and Ar^7 each independently represent a tri-valent aromatic hydrocarbon group or a tri-valent heterocyclic group, Ar^4, Ar^5, Ar^6 and Ar^7 may have a substituent, and when Ar^4 and Ar^5 have a substituent, these may be connected to form a ring. X^9, X^{10}, X^{11} and X^{12} each independently represent a hydrogen atom, alkylsulfonate group, arylsulfonate group, arylalkylsulfonate group, boric ester group group, $-B(OH)_2$, methyl monohalide group, sulfonium methyl group, phosphonium methyl group, phosphonate methyl group, cyanomethyl group, formyl group, vinyl group, hydroxyl group, alkyloxy group, acyloxy group, substituted silyloxy group, amino group or nitro group, and at least one of X^9, X^{10} and

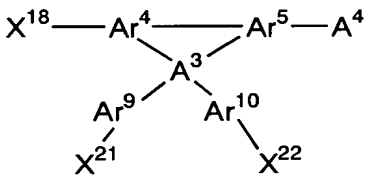
X^3 in formula (5) and at least one of X^9, X^{10}, X^{11} and X^{12} in formula (6) represent a halogen atom, alkylsulfonate group, arylsulfonate group, arylalkylsulfonate group, boric ester group group, $-B(OH)_2$, methyl monohalide group, sulfonium methyl group, phosphonium methyl group, phosphonate methyl group, cyanomethyl group, formyl group or vinyl group.]

4. The aromatic compound according to Claim 3, wherein all of X^9, X^{10} and X^3 in formula (5) and all of X^9, X^{10}, X^{11} and X^{12} in formula (6) are selected from a halogen atom, alkylsulfonate group, arylsulfonate group, arylalkylsulfonate group, boric ester group group, $-B(OH)_2$, methyl monohalide group, sulfonium methyl group, phosphonium methyl group, phosphonate methyl group, cyanomethyl group, formyl group and vinyl group.

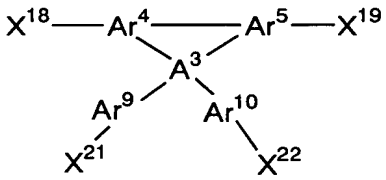
5. An aromatic compound of the following formula (9), (10) or (11):



(9)



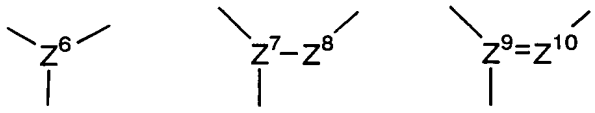
(10)



(11)

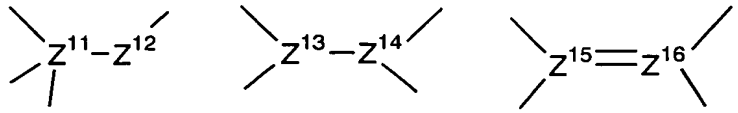
[wherein, Ar^4 and Ar^5 represent the same meaning as described above, Ar^8, Ar^9 and Ar^{10} each independently represent an arylene group or a di-valent aromatic group, Ar^4, Ar^5, Ar^8, Ar^9 and Ar^{10} may have a substituent, and when Ar^4 and Ar^5 have a substituent, these may be connected to form a ring, when Ar^9 and Ar^{10} have a substituent, these may be connected to form a ring and when Ar^9 and Ar^{10} have a substituent, these may be connected to form a ring.

A^2 represents any of the following formulae:



(wherein, Z^6 represents B, P or P(=O), Z^7 represents $C(R^9)$, $Si(R^{10})$, N, B, P or P(=O), Z^8 represents O, S, C(=O), S(=O), SO_2, $C(R^1)(R^2)$, $Si(R^3)(R^4)$, $N(R^5)$, $B(R^6)$, $P(R^7)$ or $P(=O)(R^8)$, Z^9 represents C or Si, Z^{10} represents N, B, P, $C(R^9)$ or $Si(R^{10})$, and R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9 and R^{10} represent the same meaning as described above),

A^3 represents any of the following formulae:



(wherein, Z^{11} represents C or Si, Z^{12} represents O, S, C(=O), S(=O), SO_2, $C(R^1)(R^2)$, $Si(R^3)(R^4)$, $N(R^5)$, $B(R^6)$, $P(R^7)$ or $P(=O)(R^8)$, Z^{13} and Z^{14} each independently represent $C(R^9)$, $Si(R^{10})$, B, N, P or P(=O), Z^{15} and Z^{16} each independently represent C or Si, and R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9 and R^{10} represent the same meaning as described above),

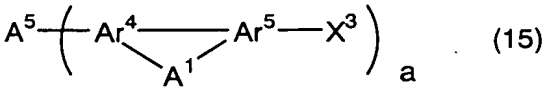
A^4 represents a hydrogen atom, alkyl group, alkyloxy group, alkylthio group, aryl group, aryloxy group, arylthio group, arylalkyl group, arylalkyloxy group, arylalkylthio group, substituted amino group, substituted silyl group, mono-valent heterocyclic group, hetero aryloxy group, hetero arylthio group, arylalkenyl group or arylethynyl group. In formula (9), Ar^5 and A^2 are connected to mutually adjacent atoms on Ar^4 ring and Ar^4 and A^2 are connected to mutually adjacent atoms on Ar^5 ring.

X^{18}, X^{19}, X^{20}, X^{21} and X^{22} each independently represent a halogen atom, alkylsulfonate group, arylsulfonate group, arylalkylsulfonate group, boric ester group group, $-B(OH)_2$, methyl monohalide group, sulfonium methyl group, phosphonium methyl group, phosphonate methyl group, cyanomethyl group, formyl group, vinyl group, hydroxyl group, alkyloxy group, acyloxy group, substituted silyloxy group, amino group or nitro group, and at least one of X^{18}, X^{19} and X^{20} in formula (9), at least one of X^{18}, X^{21} and X^{22} in formula (10) and at least one of X^{18}, X^{19}, X^{21} and X^{22} in formula (11) are selected from a halogen atom, alkylsulfonate group, arylsulfonate group, arylalkylsulfonate group, boric ester group group, $-B(OH)_2$, methyl monohalide group, sulfonium methyl group, phosphonium methyl group, phosphonate methyl group, cyanomethyl group, formyl group and vinyl group.]

6. The aromatic compound according to Claim 5, wherein all of X^{18}, X^{19} and X^{20} in formula (9), all of X^{18}, X^{21} and X^{22} in formula (10) and all of X^{18}, X^{19}, X^{21} and X^{22} in formula (11) represent a halogen atom, alkylsulfonate group, arylsulfonate group, arylalkylsulfonate group, boric ester group group, $-B(OH)_2$, methyl monohalide group, sulfonium methyl group, phosphonium methyl group,

phosphonate methyl group, cyanomethyl group, formyl group or vinyl group.

7. An aromatic compound of the following formula (15):



(15)

(wherein, Ar^4, Ar^5, A^1 and X^3 represent the same meaning as described above. A^5 represents a boron atom, aluminum atom, gallium atom, silicon atom, germanium atom, nitrogen atom, phosphorus atom, arsenic atom, a-valent aromatic hydrocarbon group, a-valent heterocyclic group or a-valent group having a metal complex structure. a represents 3 or 4. A plurality of Ar^4s, Ar^5s, A^1s and X^{10}s may be mutually the same or different.)